

Assessing and reporting of employability skills of senior secondary students



Gabrielle Matters

ACER

Gabrielle Matters is a Principal Research Fellow at ACER, Head of ACER Brisbane, and Executive Secretary of the International Association for Educational Assessment. She is an adjunct professor at QUT, with a doctorate in the field of psychometrics. Gabrielle has been keenly interested in educational assessment throughout her career as a classroom teacher (physical sciences), school administrator, test developer, policy advisor, university lecturer, researcher, and author. She has held executive management positions within the Australian education sector and has worked with education systems overseas, most recently in Colombia. Recent research includes comparative studies of curriculum content and achievement standards across Australia and between the IB diploma and the Australian States. Gabrielle has reviewed various assessment/certification systems in Australia and abroad including the examination process for membership and fellowship of the Australian College of Veterinary Scientists.



David D Curtis

NCVER

David Curtis has been researching and implementing generic employability skills for over a decade in the schooling, vocational education and training, and higher education sectors. With Dr. Phillip McKenzie (ACER) he undertook the literature review and framework development for the report 'Employability Skills for the Future'.

While working for ACER, he assisted Dr. Gabrielle Matters with a recent report on assessment and reporting options for employability skills of senior secondary students. Dr. Curtis is a Senior Research Fellow at the National Centre for Vocational Education Research.

Abstract

This paper traces the emergence of 'life skills' from being rather general and global prescriptions for educational change to specific lists of 'skills' that schooling, vocational and higher education should address. We focus specifically on the 'key skills' of the Employability Skills Framework (ESF) developed jointly by the Australian Chamber of Commerce and Industry (ACCI) and the Business Council of Australia (BCA) (ACCI & BCA, 2002). We propose a strategy for extending the definitions of the key skills to include personal, social and civic objectives. We also identify a sequence of challenges that schools and school systems must address in order to meet the requirements to develop these key skills in students, to assess achievement of them and to report achievement against them. We identify assessment as the core challenge and the further definition of these constructs as a related challenge. The credible assessment of key skills will be a driver for teaching and learning them, and will provide a sound basis for reporting achievement.

Emerging attention to life skills

Setting the global context

A period of social upheaval in Europe in 1968 caught the attention of policy makers. They realised that growing youth unemployment and consequent dissatisfaction was due, in part, to changing labour market conditions and a set of education arrangements that was out of step with the emerging requirements of the labour market. There was also recognition that social structures needed to change and that young people needed to be equipped for social structures and labour market in transformation. The Faure report (Faure et al., 1972) first documented

the forces driving this transformation – globalisation and information technology – and began to develop prescriptions that would enable young people to accommodate the consequences of these changes.

The prescriptions included the need for young people to have a diverse and very general set of skills, recognising that a narrow education delivering specific skills for particular occupations would not equip young people for inevitable but unpredictable changes. The first set of generic skills were proposed by Mertens (1974). Although he is credited with originating the concept of 'key competencies', he also recognised the importance of these generic skills in three dimensions of people's lives – individual development, career progression and civic engagement (Mertens, 1974). The importance of these dimensions has since been reiterated in much of the extensive literature on lifelong learning.

An attempt to develop measures of specific competencies

Although much policy attention has been paid to the concept of lifelong learning – learning for and throughout one's life – the generic skills that were required for ongoing learning had been elusive. The view emerged that these skills needed to be identified, and if possible measured. The OECD-sponsored DeSeCo project picked up the challenge of defining the 'key competencies' that would be required by individuals in confronting the uncertainties of future work and social challenges.

Rychen and Salganik (2000) noted that much effort around generic skills had been driven by business sectors and employers, but they also noted the importance of other spheres of application:

- increasing individual understanding of public policy issues and participation in democratic processes and institutions
- social cohesion and justice
- strengthening human rights and autonomy as counterweights to increasing global inequality of opportunities and individual marginalisation (Rychen & Salganik, 2000).
- initiative and enterprise that contribute to innovative outcomes
- planning and organising that contributes to long-term and short-term strategic planning
- self-management that contributes to employee satisfaction and growth
- learning that contributes to ongoing improvement and expansion in employee and company operations and outcomes
- technology that contributes to effective execution of tasks.

Thus, in the DeSeCo project we find evidence that generic skills are seen to have a key role in facilitating personal growth, social interaction and civic engagement in addition to their roles in sustaining labour market participation. Moreover, the same skills that are implicated in labour market success are also required for social and civic interactions.

Employment-related skills

The most recent generic employability skills initiative in Australia has been the report by the Australian Chamber of Commerce and Industry (ACCI) and the Business Council of Australia (BCA) (ACCI & BCA, 2002). The Employability Skills Framework (ESF) includes a wide range of skills, from basic to advanced, as facets of the key skills (ACCI & BCA, 2002, pp. xvi–xvii). Basic skills include, 'using numeracy effectively' and 'having a range of basic IT skills', while advanced skills include 'negotiating responsively' and 'developing a strategic, creative, long-term vision.' The key skills of the ESF are:

- communication that contributes to productive and harmonious relations between employees and customers
- teamwork that contributes to productive working relationships and outcomes
- problem solving that contributes to productive outcomes

The key skills and their purposes, listed above, provide part of the definition of these constructs. More detail is found in the facets of each skill. These facets illustrate specific applications of each key skill. The authors of the report were careful to say that the facets are not prescriptive, but are indicative of application contexts and that the 'mix and priority of these facets would vary from job to job' (ACCI & BCA, 2002, p. xvi).

The Ministerial Council on Education, Employment and Youth Affairs (MCEETYA, 2003) recognised the importance of the eight employability skills, but also noted that they were part of a broader set of generic skills required by young people. MCEETYA's qualified endorsement of the key skills of the ESF provides some support for the extension of the key skills through the development of additional facets. The National Goals for Schooling (MCEETYA, 1999) recognise young people's future roles in families and communities and as citizens.

The proposal for an Australian Certificate of Education (ACE) broadened the focus from work to citizenship (Masters et al., 2006). While the authors recognised the importance of ensuring that students developed the employability skills proposed by ACCI and BCA, they also included discussion

of 'skills and attributes for life and work beyond school' (pp. vii & 6).

Key challenges

In order to implement a set of generic skills widely in Australia's education systems, several sets of challenges must be addressed. These challenges are:

- their definition and selection
- their dissemination and implementation
- their assessment and reporting
- their certification and acceptance. (Curtis & McKenzie, 2002, pp. 54–61).

We can perceive these challenges as a sequence of steps. The central challenge is assessment but it requires consideration of issues of definition and of reporting. In the discussion that follows, we will limit discussion to two challenges, namely definition and assessment.

Definition and selection of 'the skills'

Definition is required at two levels: What do we mean when we say a skill is 'generic'? What do we mean when we nominate a particular skill, for example communication, as a generic skill? Definitions at both levels require further development. These definitions are required so that we can reach agreement about what we propose to assess.

What is a generic skill?

Some arguments about the characteristics of generic skills suggest that they should be transferable. Oates (2003) suggested that the concept of transferability should be replaced with the notion of adaptability. Generic skills can be described as adaptable if instances of them can be deployed in diverse contexts whereas transfer requires that an individual who learns

a skill in one context can apply it in others.

Several categories of broadly applicable and therefore educationally important skills are recognised. We recognise the importance of *basic skills* (mainly literacy and numeracy) because they are very broadly applicable skills themselves and because they are the foundation upon which higher levels of these skills and other sets of skills and knowledge are developed.

Generic skills differ from basic skills in that they are described at relatively high levels of *abstraction* and *generality*. Inspection of the descriptions provided in most generic skills schemes reveals 'skills' such as communication, teamwork and problem solving. None of these, nor the many other generic skills labels, indicate precisely what is envisaged. These abstract labels and descriptions of skills need to be elaborated in much more detail in order to communicate their intentions. Thus, in the ESF for example, the eight key skills are listed, broadly defined and then illustrated through a series of indicative facets.

Assessment and reporting

Requirements of assessment methods

In this paper, we are concerned mainly with reporting individual achievement of generic and employability skills. However, the signalling function of assessment is important. Assessment is deemed to have three broad sets of purposes: namely, to promote learning; to measure individual achievement; and to evaluate programs (Airasian, 1994; Pellegrino, Chudowsky, & Glaser, 2001). An assessment regime is required in which a series of learning and assessment activities occurs, through which evidence of performance is used to inform subsequent learning and that

accumulates and provides a basis for reporting achievement.

A process for developing a generic skills assessment regime

For assessment systems to be useful in providing informative feedback to learners and teachers and for reporting achievement, levels of performance must be manifest. This requires that:

- each generic employability skill must be defined as an assessable construct
- global performance descriptions must be developed
- standards descriptors must be devised for each facet of each skill.

These stages in the development of a generic skills assessment regime are demanding. Judgements must be made about the effort required to develop a robust assessment system that will provide a sound basis for credible reporting of generic skills achievement and the perceived benefits to learners and other stakeholders.

What are the options to address these challenges?

Here, we review three options and draw attention to the benefits and difficulties that attend each one.

Standardised tests

Standardised tests comprise items for which students select responses from prescribed options (typically multiple-choice items) or for which students provide limited constructed responses. An example of this approach for assessing generic skills is the Graduate Skills Assessment (ACER, 2001). Disadvantages of this approach to testing generic skills include the high cost of developing quality tests. There are also costs associated with the

management and administration of such tests. Perhaps the major disadvantage is the limitation of this form of testing to a subset of the facets of generic skills. Certain skills, such as teamwork, need to be evaluated in authentic situations, and a pencil and paper or online test does not provide this context. The clear advantages of this approach are the validity and reliability of the tests for those constructs that are amenable to this method. While this method may not impact substantially on the workload of teachers, this lack of impact also signals a clear disadvantage: by not requiring the engagement of teachers, the valuable backwash effects of assessment are lost.

Common assessment tasks

Assessment tasks have been developed that provide an opportunity for students to demonstrate a range of related abilities that constitute a complex cognitive ability. Responses to these tasks have multiple dimensions, and judgements are made about each dimension according to performance level descriptions. Because the tasks must be common across the school curriculum, a mapping exercise is required in which opportunities for each of the generic skills are identified within most school subjects. This exercise has already been undertaken in Queensland in constructing the Queensland Core Skills Test (Pitman, Matters, & Nuyen, 1998). In order to ensure comprehensive coverage of the curriculum, a substantial number of tasks would need to be developed. The assessment of student performance would be undertaken by classroom teachers. While this would impose a load on teachers, the use of existing curriculum activities would minimise any disruption to teaching and learning, and indeed, could enhance the experienced curriculum. While the load is greater than in the case of standardised testing, the backwash effects are expected to

make a significant positive contribution to students' acquisition of these skills.

Teacher–group judgement

Teachers meet and consider the employability skills of individual students whom they have taught or otherwise interacted with in co-curricular activities during a school year. Teachers consider each employability skill in turn and describe the evidence they have been able to gather that illustrates each student's achievement of that skill. The diversity of contexts will require customisable standards descriptors. An example of the successful deployment of this method can be found in McCurry and Bryce (2000). The load on teachers is manageable and could be part of normal school reporting processes. What is not clear about the method is the extent of any backwash effects on teachers and students. A disadvantage of the method is that it will not lead to comparable reports of performance between schools unless there is some moderation, and the load imposed by this is likely to be substantial.

Conclusion

We have argued that generic skills are important educational constructs. The emphasis in Australia on employability skills has been a very useful catalyst for broadening the discussion to one of generic skills that have application in future employment and in the personal, social and civic dimensions of individuals' lives beyond school.

Of the many challenges that confront educators attempting to focus greater attention onto generic skills, we have identified the assessment and the definition of generic skills as the central challenges. Iteration is required between these and other issues. Generic skills need to be defined as constructs that are recognised as being important across the several dimensions

of individuals' lives in a changing society. It is not only work and work organisation that changes, but the ways in which individuals interact with others and with social institutions that evolve. A key role of schooling is to prepare young people for the uncertainty that projected but undefined change presages. Generic skills must also be defined as assessable constructs so that their assessment can be pursued. Assessment is important because it provides information to individuals about their achievement in relation to expectations, but it is valuable because it signals importance to teachers and learners and other stakeholders, including employers.

We have proposed a process by which the assessment of generic skills can be advanced and we used three possible assessment methods to illustrate the potential benefits and limitations of these methods. A similar analysis of other assessment options would reveal comparable costs and benefits for those options. An understanding of the costs, benefits and limitations of assessment options may lead us to review our expectations of generic and employability skills, and greater clarity about those expectations will enable us to develop and refine the assessment regime that will optimise the personal, social, civic and employment skill outcomes that we seek.

References

- Airasian, P. W. (1994). *Classroom assessment* (2nd ed.). New York: McGraw Hill.
- Australasian Curriculum Assessment and Certification Authorities. (2003). *The Employability Skills Framework report of mapping task undertaken by ACACA agencies*. Canberra: ACACA.
- Australian Chamber of Commerce and Industry, & Business Council of Australia. (2002). *Employability skills for*

- the future*. Canberra: Department of Education, Science and Training.
- Australian Council for Educational Research. (2001). *Graduate Skills Assessment. Summary Report*. Canberra: DETYA, Higher Education Division.
- Curtis, D. D., & McKenzie, P. (2002). *Employability skills for Australian industry: Literature review and framework development*. Canberra: Department of Education, Science and Training.
- Faure, E., Herrera, F., Kaddoura, A.-R., Lopes, H., Petrovsky, A. V., Rahnema, M., et al. (1972). *Learning to be. The world of education today and tomorrow*. Paris: UNESCO.
- Masters, G. N., Forster, M., Matters, G., & Tognolini, J. (2006). *Australian certificate of education: Exploring a way forward*. Canberra: Department of Education Science and Training.
- McCurry, D., & Bryce, J. (2000). *Victorian Board of Studies. Key Competencies levels assessment trial. Working paper 2*. Melbourne: Victorian Curriculum and Assessment Authority.
- MCEETYA. (2003). Response to advice on employability skills, *MCEETYA Out-of-session resolution*, December.
- Mertens, D. (1974). Schlüsselqualifikationen: Thesen zur Schulung für eine moderne Gesellschaft [Key 'qualifications': Theses on schooling for a modern society]. *Mitteilungen aus der Arbeitsmarkt und Berufsforschung*, 7(1), 36-43.
- Ministerial Council on Education Employment Training and Youth Affairs. (1999, July). The Adelaide Declaration on National Goals for Schooling in the Twenty-first Century. Retrieved October 10, 2000, from <http://www.mceetya.edu.au/mceetya/nationalgoals/natgoals.htm>
- Oates, T. (2003). Key skills/key competencies: Avoiding the pitfalls of current initiatives. In D. S. Rychen, L. H. Salganik & M. E. McLaughlin (Eds.), *Contributions to the second DeSeCo symposium, Geneva, 11-13 February, 2002* (pp. 171-193). Neuchatel, Switzerland: SFSO.
- Pellegrino, J., Chudowsky, N., & Glaser, R. (Eds.). (2001). Knowing what students know. *The science and design of educational assessment. A report of the National Research Council*. Washington, DC: National Academy Press.
- Pitman, J., Matters, G., & Nuyen, A. (1998). *A case for teaching generic skills*. Paper presented at the 24th Annual Conference of the International Association for Educational Assessment.
- Rychen, D. S., & Salganik, L. H. (2000). *Definition and selection of key competencies*. A report to the INES General Assembly. Neuchatel, Switzerland: OECD.